

REMARKS

The Office Action of December 24, 2009 has been reviewed and the Examiner's comments carefully considered. Claims 28, 48, and 55 have been amended by way of this Amendment. Accordingly, claims 28-52, 54, and 55 are currently pending in this application, and claims 28 and 48 are in independent form, claims 1-27 and 53 being previously cancelled. Support for the amendments made herein can be found in Figs. 1a-12, at page 5, line 28 to page 15, line 31 of the specification, as filed, and in original claims 1-27, as filed. Applicant respectfully submits that no new matter is being added by way of the current Amendment.

The drawings are objected to for failing to illustrate a plurality of sealing discs. It is submitted that this subject matter has been previously cancelled from the claims. Accordingly, Applicant requests that the objection be withdrawn.

Claims 34-36 stand rejected under 35 U.S.C. §112, first paragraph, for failing to comply with the written description requirement because the combination of the subject matter of claims 28, 29, and 34-36 is not adequately described in the specification. The drawings are objected to for failing to illustrate the combination of means for urging the disc against a container annular surface, means to prevent lateral movement of the disc relative to the container annular surface, an annular resilient membrane to be located between the abutting surfaces of the sealing disc and container annular surface, and one of a Belleville washer, a wave washer, inturned projections, and resilient fingers of the closure ring. As this rejection and objection raise similar issues, they will be treated together. The rejection and objection are respectfully traversed.

With reference to Figs. 8-11 and page 11, line 13 to page 16, four different embodiments of the present invention are shown and described. These embodiments disclose sealing discs (66, 260, 181) having a bottom abutting surface; a Belleville washer (130), a wave washer (194) and inturned projections (201) that urge the disc against a container annular surface, caps (131, 250, 182, 200) that urge the discs against a container annular surface and

prevent lateral movement of the discs relative to the container annular surface, and an annular resilient membrane (282, shown in Fig. 9d), which is located between the abutting surfaces.

Accordingly, it has been established that the written description and drawings explicitly describe each and every limitation of the claims albeit with reference to different embodiments of the invention. Therefore, the issue remaining is whether the drawings and written description provide a proper basis for claims 34-36 as a whole when the combination of claimed features is not described in a single embodiment.

Applicant submits that the test for compliance with the written description requirement is not whether the complete combination of claimed elements is disclosed in a singular embodiment, but whether “the description clearly allows persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed.” MPEP §2163.02. With reference to MPEP §2163, the claimed invention need not be explicitly described in a singular embodiment that has been reduced to practice. Reliance may be made upon partial construction of the claimed combination of features in addition to other considerations. In the present case, the embodiment illustrated in Fig. 9d and discussed at page 13, lines 6-22, supports the claimed subject matter of base claims 28 and 29. The biasing means between the cap and the sealing disc that is one of a spring washer, a Belleville washer and a wave washer or inturned projections on the cap that are compressible are further described with reference to Figs. 8b, 8c, 10b, and 11a-11d; page 11, lines 13-33; and page 13, line 28 to page 15, line 16.

One of ordinary skill in the art would have appreciated, based upon the disclosure set forth in the written description and drawings, that the particular embodiment disclosed in Fig. 9d could have been modified by adding a biasing means in keeping with any one of the embodiments disclosed in Figs. 8b, 8c, 10b, and 11a-11d without departing from the disclosed invention and would recognize that Applicant had possession of the claimed invention at the time of filing since the description of Fig. 9d does not exclude the provision of a biasing means and the construction of the biasing means does not rely upon features not present in the embodiment

of Fig. 9d. Accordingly, Applicant submits that the claimed subject matter of claims 34-36 is fully supported by the specification and illustrated in the drawings, as filed, and respectfully requests that these rejections and objections be withdrawn.

Claims 28-52, 54, and 55 stand rejected under 35 U.S.C. §103(a) for obviousness over United States Patent No. 4,366,912 to Matukura et al. (hereinafter "Matukura"), in view of United States Patent No. 597,083 to Mallo (hereinafter "Mallo"). In view of the foregoing amendments and following remarks, reconsideration and withdrawal of this rejection are respectfully requested.

Claims 28, 48, and 55 have been amended to clarify that the first surface tension seal formed by the first and second extremely flat surfaces in parallel abutting contact is a primary surface tension seal. Independent claims 28 and 48 also recite claim limitations as to a closure for a container defining a first extremely flat annular surface including a sealing disc defining a second extremely flat surface, which forms the primary surface tension seal with the first extremely flat annular surface when they are urged into parallel abutting contact, and an annular resilient membrane, which forms a secondary seal. Further, claims 28 and 48 also recite that the annular resilient membrane is positioned between the sealing disc and part of the first extremely flat surface and that the extremely flat surfaces of the container and the sealing disc each have a flatness being in the order of a few wavelengths of light.

Applicant submits that Matukura and Mallo, taken separately or combined, fail to teach or suggest the above-mentioned claimed subject matter of claims 28 and 48, as amended.

Matukura teaches a rubber closure device for vials. The closure device includes an inner closure body (1) that includes a leg portion (11) that extends into the open mouth (12) of a vial (3) and a top portion (27) that extends partially across the top surface of the mouth (12) of the vial (3). The inner closure body (1) is formed from a vulcanized synthetic rubber, preferably containing fluorine atoms. The inner closure body (1) is secured to an overlay closure member

(2) that encloses the inner closure body (1) and also seals against the top of the vial (3) outside of the inner closure body (1). The overlay closure member (2) is formed from a gas-impermeable synthetic rubber material. The inner closure body (1) and the overlay closure member are secured to the vial (3) by a seal ring (4). The overlay closure member (2) is provided to avoid access of fluid to the inner closure body (1) and to be resealable after being pierced by an injection needle inserted into the vial (3). Please note Fig. 1; column 2, line 57 to column 3, line 11; and column 4, line 33 to column 5, line 19 of Matukura.

Mallo teaches a fruit jar and cover. The cover includes a lid (5) and a metallic cap (4), which threadably attaches to a bottle neck. An O-ring (12) is provided between a registering groove (11) in the lid (5) and an annular groove (10) formed in a top annular surface of the bottle neck. Please note the Figure and column 1, line 24 to column 2, line 50 of Mallo.

According to the Office Action, it would have been obvious to form the overlay closure member (2) taught by Matukura from a hard material, as taught by Mallo, because doing so provides a closure of impermeable material and provides a sealing engagement between the annular resilient member and associated container rim that also prevents tampering with the container contents.

The Office Action also asserts that it would have been obvious to form the sealing disc and associated container neck rim of a flatness in the order of a few wavelengths of visible light to ensure little interruptions are present to interfere with the sealing of the container. Applicant respectfully disagrees.

Matukura teaches a vial (3) that includes an annular flat surface. Assumedly, the vial (3) is formed of glass. However, Matukura does not teach or suggest that the annular flat surface of the vial (3) is an extremely flat surface with a flatness in the order of a few wavelengths of visible light, as is claimed in claims 28 and 48. Further, the top of the vial (3) is in contact with two rubber closure members, a central rubber closure member (1), which is made

of fluorinated rubber, and a rubber closure member (2). Matukura also does not teach that either the central rubber closure member (1) or the rubber closure member (2) is formed with an extremely flat surface with a flatness in the order of a few wavelengths of visible light, as is claimed in claims 28 and 48.

With respect to Mallo, the reference makes no mention of the specific material of the lid (5) and does not particularly teach that the lid (5) is made of a hard material. Further, Applicant submits that Mallo does not teach or suggest that the surfaces of the lid (5), having a depending rim (9), and the annular ledge (6) of the bottle neck are extremely flat surfaces, as is claimed in claims 28 and 48. Mallo also fails to teach or suggest that the depending rim (9) and the annular ledge (6) engage each other in parallel abutting contact to form a primary surface tension seal, as is claimed in claims 28 and 48. Rather, Mallo teaches that the depending rim (9) and the annular ledge (6) do not engage at all when the jar is closed, as illustrated in the Figure. Thus, the only seal taught by Mallo is the seal formed by the O-ring (12) between the lid (5) and the bottle neck. Finally, Mallo fails to teach or suggest that any of the surfaces of the bottle neck and the lid (5) are extremely flat with a flatness in the order of a few wavelengths of visible light.

Accordingly, both Matukura and Mallo teach that the primary seal in the closures is formed by a rubber or plastic insert. Neither of these references teach nor suggest that a surface of a sealing disc of a hard material engages an annular surface of a container in parallel abutting contact to form a primary surface tension seal or that these surfaces are extremely flat having a flatness in the order of a few wavelengths of visible light, as is claimed in claims 28 and 48.

At best, the combined teachings of Matukura and Mallo suggest a modification to the closure of Matukura to modify the overlay closure member (2) so that the closure member (2) is formed from a hard material, though it is again noted that Mallo does not specifically teach the material that forms the lid (5). It is also noted that such a modification would likely prevent the closure of Matukura from being piercable by a needle and subsequently resealable, which would

render the closure unsuitable for its intended purpose as taught by Matukura. Further, to the extent that Mallo could possibly teach that the lid (5) is formed of a hard material, Mallo teaches that the lid (5) does not engage the annular ledge (6) of the jar. The teachings of Mallo, therefore, would be counter suggestive of a seal formed by two hard materials, as is claimed in claims 28 and 48.

Mallo, therefore, fails to provide a reasonable expectation to one having ordinary skill in the art that a primary surface tension seal could be formed in a closure according to the combined teachings of Matukura and Mallo. Mallo, therefore, does not fairly suggest a modification to the closure taught by Matukura that achieves the claimed invention.

As discussed above, neither Matukura nor Mallo teach or suggest a primary surface tension seal formed by extremely flat surfaces urged into parallel abutting contact, wherein the extremely flat surfaces each have a flatness being in the order of a few wavelengths of visible light. The Office Action does not elaborate on how forming such a seal falls within the knowledge or skill of one having ordinary skill in the art. Rather, it appears that the only suggestion for forming a primary surface tension seal from extremely flat surfaces urged into parallel abutting contact comes from Applicant's own disclosure, which cannot form the basis for an obviousness rejection.

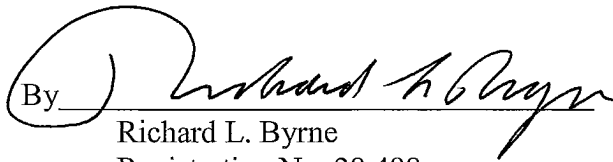
Applicant submits that claims 27 and 48, as amended, are allowable for at least the foregoing reasons, as the teachings of the prior art of record, including Matukura and Mallo, fails to teach or suggest the claimed subject matter.

Claims 29-47, 52, 54, and 55 are dependent upon and add further limitations to independent claim 28. Claims 49-51 are dependent upon and add further limitations to independent claim 48. These claims are allowable for at least the same reasons discussed above in connection with claims 28 and 48.

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Based on the foregoing amendments and remarks, reconsideration of the rejections and allowance of pending claims 28-52, 54, and 55 are respectfully requested.

Respectfully submitted,
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